

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-362699

(43)Date of publication of application : 15.12.1992

(51)Int.Cl.

G10L 3/00

(21)Application number : 03-139092

(71)Applicant : CANON INC

(22)Date of filing : 11.06.1991

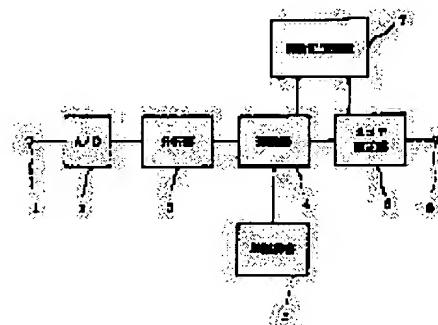
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(54) METHOD AND DEVICE FOR VOICE RECOGNITION

(57)Abstract:

PURPOSE: To improve principle defects of word spotting and increase the recognition rate of voice recognition by correcting the score of the word matching so that the score is higher and higher as the length of a standard pattern is longer and longer corresponding the length of a voice section detected as a result of the word spotting using the standard pattern.

CONSTITUTION: This device consists of an input terminal 1 for a voice, an A/D conversion part 2, a feature parameter analysis part 3, a recognition part 4, a word dictionary 5 which is used by the recognition part 4 at the time of a recognizing process, a score correction part 6, an auxiliary storage device 7, and an output terminal 8 for a recognition result. This constitution weights an arithmetic result so that long words are given priority. Namely, the voice section is so segmented by the word spotting that, for example, a word standard pattern/roku/which has more syllables is longer in voice section than a word standard pattern/ku/with one syllable. Scores of 2nd order and successors are corrected on the basis of the voice section length with a score of 1st order in reverse proportion to the detected voice section length of each word standard pattern.



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[Date of request for examination]

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[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

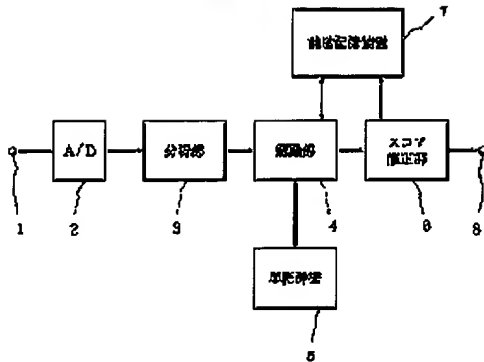
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【図1】



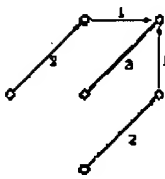
【図2】

映像番号	単語
1	ゼロ
2	ワン
3	ニ
4	レイ
5	ササ
6	オン
7	ガ
8	マル
9	シ
10	ロク
11	ク
12	ハチ
13	ジュ
14	キウ
15	イチ
16	ハイ
17	イイユ

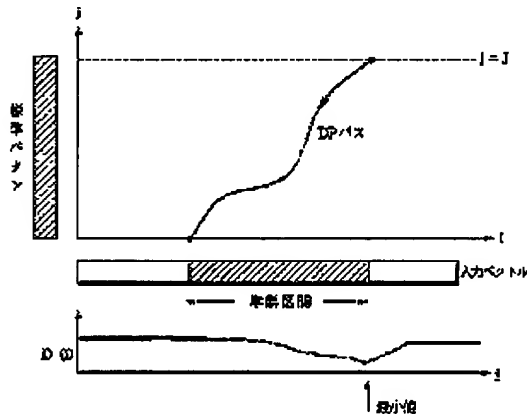
【図3】

フレーム1	m_1	Σ_1^{-1}
フレーム2	m_2	Σ_2^{-1}
...
フレームJ	m_J	Σ_J^{-1}
...
フレームJ	m_J	Σ_J^{-1}

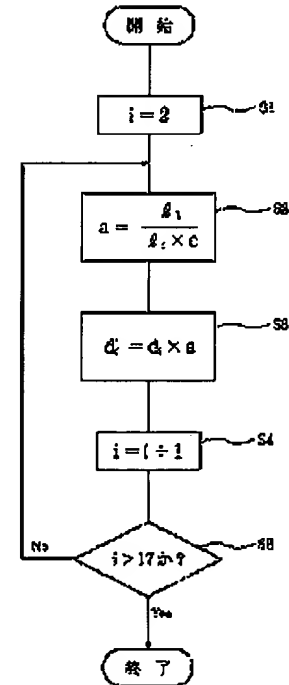
【図4】



【図5】



【図7】



【図8】

順数	単語	スコア	時間長 (ms)	修正係数	修正後のスコア	修正後の順数
1	KU	3.34	70	-	3.34	2
2	ROKU	3.51	165	0.71	2.48	1
3	KYUU	6.08	105	1.11	6.73	3
4	YOE	5.71	100	1.27	6.68	4
...
16	SI	16.97	180	0.60	16.20	16
17	ME	31.23	180	0.59	28.69	17

【図10】

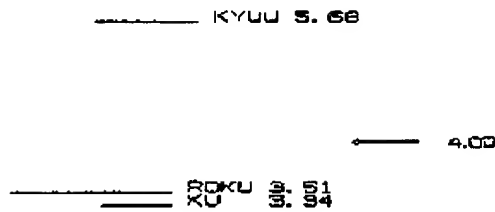
順数	単語	スコア	時間長 (ms)	修正係数	修正後のスコア	修正後の順数
1	KU	3.34	70	-	3.34	1
2	ROKU	3.51	165	1.05	3.51	4
3	KYUU	6.08	105	1.00	6.08	3
4	MAJU	6.80	208	1.14	7.75	2
...
16	SI	16.97	175	1.85	28.07	16
17	ME	31.23	145	1.01	31.56	17

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【図6】

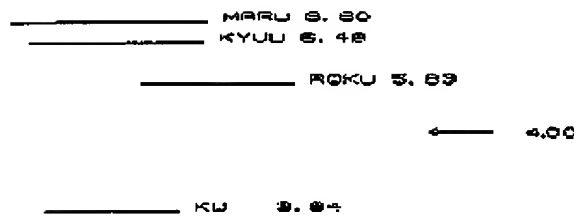


【図11】

フレーム1	u ₁
フレーム2	u ₂
フレームj	u _j
フレームj	u _j



【図9】



フロントページの続き

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